In the claims:

All pending claims are set forth here. Cancel claims 3 and 6. Amend claims 4 and 48 to read as follows. Claims 1-3, 5-8 and 13-47 are now canceled.

1-3 (canceled).

4 (currently amended). The composite structure of claim [[3]] 48, wherein said processing aid comprises silicon hexaboride.

5-8 (canceled).

9 (previously presented). The composite structure of claim 48, wherein said first layer material impregnates said substrate to a depth of approximately 0.1 inches.

10 (previously presented). The composite structure of claim 48, wherein said substrate material is selected from the group consisting of a fibrous and open pore silica, silicon carbide, aluminosilicate, silicon oxycarbide and carbon substrates.

11 (previously presented). The composite structure of claim 48, wherein at least one component of said second layer has a particle size less than about 5 μm.

12 (previously presented). The composite structure of claim 48, wherein at least one component of said second layer has a particle size distribution having a maximum of approximately 5 μm and a mode of approximately 1 μm.

13-47 (canceled).

48 (currently amended). A composite structure, comprising:

a porous substrate, having a lower surface and an upper surface and comprising a selected substrate material and having a substrate coefficient of thermal expansion;

a first layer integrated with an exposed surface of the substrate, wherein the first layer material comprises between 5 percent and 70 percent tantalum disilicide, between 5 percent and 30 percent molybdenum disilicide, and between 10 percent and 95 percent borosilicate glass, with the first layer being positioned adjacent to and between the substrate upper surface and a second layer having a material composition different from the first layer.

wherein the second layer material comprises between 20 percent and 60 percent molybdenum disilicide, between 40 percent and 80 percent borosilicate glass and a processing aid, ~~such as silicon hexaboride,~~ wherein composition of a combination of the first layer and the second layer is chosen so that a coefficient of thermal expansion of the ~~second layer~~ combination is approximately the same as a coefficient of thermal expansion of the ~~first layer~~ substrate, and the combined first and second layers provide a protective layer when exposed to temperatures around 3000 ^{o}F